

Name: _____

at1110paper_practice_test (v20)

1. Expand the following expression into standard form.

$$(7x + 8)(4x + 3)$$

$$\begin{aligned}28x^2 + 21x + 32x + 24 \\28x^2 + 53x + 24\end{aligned}$$

2. Expand the following expression into standard form.

$$(2x + 9)^2$$

$$\begin{aligned}4x^2 + 18x + 18x + 81 \\4x^2 + 36x + 81\end{aligned}$$

3. Factor the expression.

$$x^2 + 5x + 6$$

$$(x + 3)(x + 2)$$

4. Solve the equation with factoring by grouping.

$$20x^2 - 15x - 8x + 6 = 0$$

$$\begin{aligned}(5x - 2)(4x - 3) = 0 \\x = \frac{2}{5} \quad x = \frac{3}{4}\end{aligned}$$

5. Factor the expression.

$$25x^2 - 64$$

$$(5x + 8)(5x - 8)$$

6. Solve the equation.

$$9x^2 - 33x - 66 = 4x^2 + 5x - 3$$

$$5x^2 - 38x - 63 = 0$$

$$(5x + 7)(x - 9) = 0$$

$$x = \frac{-7}{5} \quad x = 9$$

7. Solve the equation.

$$(9x - 5)(7x - 6) = 0$$

$$x = \frac{5}{9} \quad x = \frac{6}{7}$$

8. Expand the following expression into standard form.

$$(9x + 7)(9x - 7)$$

$$81x^2 - 63x + 63x - 49$$

$$81x^2 - 49$$